



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/771,333

02/05/2004

Yin-Chun Huang

4425-346

3934

7590

10/26/2005

LOWE HAUPTMAN GILMAN & BERNER, LLP
1700 Diagonal Road, Suite 310
Alexandria, VA 22314

EXAMINER

SUN, XIUQIN

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,333

Applicant(s)

HUANG ET AL.

Examiner

Xiuqin Sun

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 16-22 is/are rejected..
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawanaka et al. (U.S. Pub. No. 20030150724) in view of Ueno et al. (U.S. Pub. No. 20020133064).

In regard to claim 1:

Kawanaka et al. teach a method for determining the resolution of blood glucose, comprises: obtaining an analog signal source from a blood glucose solution being applied to an amplifier circuit which includes a reference resistance (Figs. 1 and 16; and sections 0092-0094); transforming said analog signal source into a digital signal (Figs. 1 and 16; and sections 0092-0094).

Kawanaka et al. do not mention explicitly: transmitting said digital signal with a rising curve to obtain an approximate local maximum value of said rising curve; and determining said resolution of blood glucose according to said approximate local maximum value.

Ueno et al. teach a method and system for determining blood sugar level (Figs. 2 and 18), including the steps of: transmitting out said digital signal with a rising curve to

Art Unit: 2863

obtain an approximate local maximum value of said rising curve (Figs. 5 and 6; and sections 0062 and 0063); and determining said resolution of blood glucose according to said approximate local maximum value(sections 0063).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Ueno et al. in the invention of Kawanaka et al. in order to implement a more precise blood glucose concentration measuring device having higher measurement accuracy (Ueno et al., sections 0011 and 0064).

In regard to claims 2-4:

The teaching of Kawanaka et al. further includes: said analog signal source is generated at least in part, in response to application of the blood glucose solution on a test strip having a catalyst (sections 0002 and 0003); said analog signal source is generated at least in part, on an oxidation reduction reaction occurring in response to said application of said test strip (sections 0005, 0006, and 0104); said transforming said analog signal source includes transmitting said analog signal source through an analog front end (AFE) (Figs. 1 and 16).

In regard to claim 5:

Kawanaka et al. teach the claimed invention except: said approximate local maximum value being the difference between a first time (t_1) and an initial time (t_0) and said difference being larger than zero.

The teaching of Ueno et al. further includes: said approximate local maximum value being the difference between a first time (t_1) and the initial time (t_0) and said difference being larger than zero (Figs. 5 and 6; and sections 0062 and 0063);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Ueno et al. in the invention of Kawanaka et al. in order to implement a more precise blood glucose concentration measuring device having higher measurement accuracy (Ueno et al., sections 0011 and 0064).

In regard to claim 16:

The teaching of Kawanaka et al. further includes: providing a blood glucose solution for reaction on a test strip having an enzyme to produce an analog signal source (Figs. 1 and 16; and sections 0092-0094); transmitting said analog signal source into a measurement circuit (Figs. 1 and 16; and sections 0092-0094); transforming said analog signal source into a digital signal (Figs. 1 and 16; and sections 0092-0094); and making a mapping table of said approximate local maximum value and an outputted voltage (sections 0092-0094).

Kawanaka et al. do not mention explicitly: outputting said digital signal with a rising curve; determining an approximate local maximum value of said of said rising curve.

Ueno et al. teach a method and system for determining blood sugar level (Figs. 2 and 18), including the steps of: outputting said digital signal with a rising curve (Figs. 5 and 6; and sections 0062 and 0063); determining an approximate local maximum value of said of said rising curve; (Figs. 5 and 6; and sections 0062 and 0063).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Ueno et al. in the invention of Kawanaka

et al. in order to implement a more precise blood glucose concentration measuring device having higher measurement accuracy (Ueno et al., sections 0011 and 0064).

In regard to claims 17 and 18:

The teaching of Kawanaka et al. further includes: producing said analog signal source at least in part in response to an oxidation reduction reaction (sections 0005, 0006, and 0104); said transforming said analog signal source further comprises transmitting said analog signal source through an analog front end (AFE) (Figs. 1 and 16).

In regard to claims 19-22:

The teaching of Kawanaka et al. further includes: said measuring circuit includes a resistance (Fig.1 and 16; and sections 0092-0094); said measuring circuit includes a reference resistance (Fig.1 and 16; and sections 0092-0094); said measuring circuit includes a reference voltage (Fig.1 and 16; sections 0092-0094); said outputted voltage is determined by said reference voltage (Fig.1 and 16; sections 0092-0094).

Allowable Subject Matter

3. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 8-15 are allowed.

Reasons for Allowance

5. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claim 6 is the inclusion of the limitation of determining an average peak value of a plurality of said approximate local maximum values after a pre-setting sampling time. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 7 is the inclusion of the limitation of providing a mapping table of an outputted voltage and a plurality of approximate local maximum values from a plurality of said rising curves. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claims 8-15 is the inclusion of the method steps of: determining an average peak value at an approximate local maximum peak point of said rising curve after a pre-setting sampling time; and determining said resolution of blood glucose according to said average peak value. It is these steps found in each of the claims, as they are claimed in the combination that have not been found, taught or suggested by the prior art of record, which make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

7. Applicant's arguments filed 08/09/2005 have been fully considered but they are not persuasive.

Claims 1-5 and 16-22 are rejected as new grounds have been found from the Ueno reference (U.S. Pub. No. 20020133064) to teach the limitation argued by the Applicant. Detailed response is given in section 3 as set forth above in this Office Action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280.

The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Xiuqin Sun
Examiner
Art Unit 2863

XS
October 24, 2005

BRYAN BUI
PRIMARY EXAMINER

